IN THE CLAIMS

Claims 1-28. (canceled)

29. (withdrawn) A therapeutic drug delivery patch for the transdermal delivery of a drug comprising:

a backing layer, a peelable cover layer sealably and removably associated with said backing layer and the therapeutic adhesive formulation of claim 1 disposed therebetween so as to be exposed for intimate contact with the skin of a patient when said peelable core layer is removed, said patch being substantially without a means to prevent any reaction between said pharmaceutically active agent and said biocompatible deprotonating agent.

30. (withdrawn) A therapeutic drug delivery patch for the transdermal delivery of a drug comprising:

a backing layer, a peelable cover layer sealably and removably associated with said backing layer and the therapeutic adhesive formulation of claim 12 disposed therebetween so as to be exposed for intimate contact with the skin of a patient when said peelable core layer is removed, said patch being substantially without a means to prevent any reaction between said pharmaceutically active agent and said biocompatible deprotonating agent.

31. (withdrawn) A therapeutic drug delivery patch of claims 29 or 30, further comprising a means for controlling the rate of a deprotonation reaction between said protonated pharmaceutically active agent and said deprotonating agent.

32. (withdrawn) The therapeutic drug delivery patch of claim 31, wherein said means for controlling said deprotonating reaction includes providing a plurality of adhesive layers, at least one of said layers including said protonated pharmaceutically active agent and at least one other of said layers including said biocompatible deprotonating agent.

33. (withdrawn) The therapeutic drug delivery patch of claim 31, wherein said means for controlling said deprotonation reaction is a viscosity modifier.

34. (withdrawn) A method of producing an adhesive formulation for a therapeutic drug delivery patch adapted for the transdermal delivery of a drug comprising the steps of:

providing a pharmaceutically active agent in protonated form, whose corresponding nonprotonated form has a given pK_b which ranges from between about 4.75 and about 11;

dissolving said protonated pharmaceutically active agent in a nonaqueous solvent, said nonaqueous solvent being capable of dissolving said pharmaceutically active agent in both a protonated and nonprotonated forms;

reacting said dissolved pharmaceutically active agent with a biocompatible deprotonating agent which can substantially deprotonate said pharmaceutically active agent without causing irritation upon prolonged exposure to the skin, said biocompatible deprotonating agent having a pK_b which is at least about 0.75 lower than said pK_b of said pharmaceutically active agent in nonprotonated form, said deprotonated agent thereby becoming protonated; and

incorporating at least said deprotonated pharmaceutically active agent into an adhesive material so as to form a therapeutic adhesive formulation.

35. (withdrawn) The method of claim 34 further comprising the step of separating at least a portion of said protonated deprotonating agent from said mixture of deprotonated pharmaceutically active agent, solvent and protonated deprotonating agent prior to incorporating said pharmaceutically active agent into said adhesive agent.

36. (withdrawn) The method of claim 34 further comprising the step of separating at least a portion of said

protonated deprotonating agent from said mixture of deprotonated pharmaceutically active agent, solvent and protonated deprotonating agent after incorporating said pharmaceutically active agent into said adhesive agent.

37. (withdrawn) The method of claim 35 or 36 wherein said protonated deprotonating agent is in the form of a crystal or precipitate.

38. (withdrawn) The method of claims 35 or 36 wherein said protonated deprotonating agent is separated by filtration.

39. (withdrawn) The method of claims 35 or 36 wherein said protonated deprotonating agent is separated by centrifugation.

40. (withdrawn) A therapeutic drug delivery patch for the percutaneous delivery of a drug comprising:

a backing layer;

a peelable cover layer sealably and removably associated with said backing layers;

and a therapeutic adhesive formulation comprising an adhesive material, a first pharmaceutically active agent in nonprotonated, a second pharmaceutically active agent in the form of a protonated salt having a pK_b which is higher than the pK_b of said first pharmaceutically active agent and a nonaqueous solvent capable of dissolving said first and said second pharmaceutically active agents in at least one form;

said therapeutic adhesive formulation being disposed between said backing layer and said peelable cover layer so as to be exposed for intimate contact with the skin of a patient once said peelable layer is removed.

41. (withdrawn) A method of producing a therapeutic drug delivery patch for the percutaneous delivery of a drug comprising the steps of:

forming a first layer including at least one pharmaceutically active agent in protonated form;

forming a second layer including at least one deprotonating agent capable of completely deprotonating said pharmaceutically active agent in said first layer;

drying said first and said second layers;

placing said first and said second layers into intimate contact with one another;

and placing said first and said second layers into a therapeutic drug delivery patch.

42. (withdrawn) The method of claim 41 wherein said deprotonating agent has a pK_b which is at least 0.75 lower than the pK_b of said pharmaceutically active agent.

43. (withdrawn) The method of claim 42 wherein said deprotonating agent has a pK_b which is at least 1.0 lower than the pK_b of said pharmaceutically active agent.

44. (withdrawn) The method of claim 41 wherein the pK_b of said pharmaceutically active agent ranges from between about 4.75 and about 11.

45. (withdrawn) The method of claim 41 wherein the pK_b of said deprotonating agent ranges from between about 4 and about 10.

46. (withdrawn) The method of claim 41 wherein at least one of said layers is an adhesive formulation.

47. (withdrawn) The method of claim 41 wherein both of said layers are adhesive formulations.

48. (withdrawn) The method of claim 41 further comprising the step of adjusting the diffusion characteristics of said first and said second layers so as to influence the rate of the deprotonating reaction between said pharmaceutically active agent disposing said first layer and said deprotonating agent disposed in said second layer.

49. (withdrawn) A method of producing a transdermal therapeutic adhesive formulation including at least one highly plasticizing drug comprising the steps of:

providing between about 65% and about 97%, by weight, of an acrylic polymeric adhesive which includes between about 40% and about 90% of a C_4-C_{12} alkyl acrylate, between about 10% and about 40% by weight of a C_1-C_4 alkyl acrylate hardening monomer; between about 1% and about 20% by weight of a functionalizing monomer which facilitates crosslinking; and a crosslinking agent;

mixing said acrylic polymeric adhesive with a highly plasticizing drug in an amount which is sufficient to provide between about 3% and about 35% of said drug by weight based on the weight of the mixture when said transdermal therapeutic adhesive formulation is dry;

and crosslinking said acrylic polymeric adhesive to form a matrix capable of controlling the release of said highly plasticizing drug.

50. (withdrawn) The method of claim 49 wherein between about 3% and about 70% of said drug is mixed with said acrylic polymeric adhesive.

51. (withdrawn) The method of claim 49 wherein crosslinking is accomplished *in situ* by drying the mixture.

52. (withdrawn) The method of claim 49 wherein said C_4-C_{12} alkyl acrylate is selected from the group consisting of 2-ethylhexyl acrylate, butyl acrylate, n-decyl, n-nonyl, 2 ethyoctyl, isooctyl and dodecyl-acrylate.

53. (withdrawn) The method of claim 49 wherein said C_4-C_{12} alkyl acrylate is provided in an amount of between about 60% and about 80% by weight based on the total weight of the acrylic polymeric adhesive.

54. (withdrawn) The method of claim 49 wherein said C_1-C_4 alkyl acrylate hardening monomer is selected from the group

consisting of methyl acrylate, methyl methacrylate, ethylacrylate, ethyl methacrylate, hydroxyethyl acrylate and hydroxy propyl methacrylate.

55. (withdrawn) The method of claim 49 wherein said C_1-C_4 alkyl acrylate hardening monomer is provided in an amount of between about 15% and about 30% by weight based on the total weight of the acrylic polymeric adhesive.

56. (withdrawn) The method of claim 49 wherein said functionalizing monomer which facilitates crosslinking is selected from the group consisting of acrylic acid, hydroxy thylacrylate, hydroxy ethylacrylate, methacrylic acid, and acrylamide.

57. (withdrawn) The method of claim 49 wherein said functionalizing monomer which facilitates crosslinking is provided in an amount of between about 1% and about 10% by weight based on the total weight of the acrylic polymeric adhesive.

58. (withdrawn) The method of claim 49 wherein said C_4-C_{12} alkyl acrylate is selected from the group consisting of 2-ethylhexyl acrylate, butyl acrylate, n-decyl, n-nonyl, 2 ethyoctyl, isooctyl and dodecyl-acrylate and is provided in an amount of between about 60% and about 80% by weight based on the total weight of the acrylic polymeric adhesive and wherein said C_1-C_4 alkyl acrylate hardening monomer is selected from the group consisting of methyl acrylate, methyl methacrylate, ethylacrylate, ethyl methacrylate, hydroxyethyl acrylate and hydroxy propyl methacrylate and is provided in an amount of between about 15% and about 30% by weight based on the total weight of the acrylic polymeric adhesive.

59. (withdrawn) The method of claim 58 wherein said highly plasticizing drug is selected from the group consisting of selegiline, fluoxetine, Des-methyl selegiline, tetracaine and chlorpheniramine.

60. (withdrawn) The method of claim 59 wherein said highly plasticizing drug is provided in an amount of between about 3% and about 25% by weight of the therapeutic adhesive formulation.

61. (withdrawn) The method of claim 60 wherein said highly plasticizing drug is provided in an amount of between about 3% and about 18% by weight of the therapeutic adhesive formulation.

62. (withdrawn) The method of claim 49 wherein said crosslinking agent is selected from the group consisting of butyl titinate, polybutyl titinate, aluminum isopropoxide, aluminum zinc acetate, multivalent metals, methylol ureas and melamines.

63. (withdrawn) The method of claim 49 wherein said crosslinking agent is provided in an amount of between about 0.005% and about 2% based on the total weight of the acrylic polymeric adhesive.

64. (withdrawn) A method of producing a therapeutic adhesive formulation for use in a transdermal patch comprising the steps of: selecting an acrylic polymeric adhesive which is suitable for use with highly plasticizing drugs based upon it's content of between about 40% and about 90% of a C_4-C_{12} alkyl acrylate and between about 10% and about 40% by weight of a C_1-C_4 alkyl acrylate hardening monomer; and mixing said acrylic polymeric adhesive with a highly plasticizing drug in an amount of between about 3% and about 65% by weight based on the weight of said mixture.

65. (withdrawn) The method of producing a therapeutic adhesive formulation for use in a transdermal patch of claim 64 further comprising the step of: selecting an acrylic polymeric adhesive which is suitable for use with highly plasticizing drugs based upon it's content of between about 40% and about 90% of a C_4-C_{12} alkyl acrylate and between about 10%

and about 40% by weight of a C_1-C_4 alkyl acrylate hardening monomer; between about 1% and about 20% by weight of a functionalizing monomer which facilitates crosslinking; and a crosslinking agent.

66. (withdrawn) The method of producing a therapeutic adhesive formulation for use in a transdermal patch of claim 65 further comprising the step of: drying said mixture of said acrylic polymeric adhesive and said highly plasticizing drug to form a matrix capable of controlling the release of said highly plasticizing drug when placed in a transdermal patch and applied to the skin of a patient and which will not ooze, suffer from adhesive failure, fall off of a patient prematurely or be difficult to remove when necessary.

67-93 (canceled).

94. (previously presented) A therapeutic adhesive formulation comprising between about 65% and about 97% by weight of an acrylic polymeric adhesive which includes between about 40% and about 90% of a C_4-C_{12} alkyl acrylate; between about 10% and about 40% by weight of a C_1-C_3 alkyl acrylate hardening monomer; between about 1% and about 20% by weight of a functionalizing monomer which facilitates crosslinking; and between about 3% and about 35% by weight of said mixture, of a highly plasticizing drug component.

95. (previously presented) The therapeutic adhesive formulation of claim 94 wherein said highly plasticizing drug component comprises a liquid drug component.

96. (previously presented) The therapeutic adhesive formulation of claim 94 wherein said highly plasticizing drug component comprises a solid drug component dissolved in a plasticizing solvent.

97. (previously presented) The therapeutic adhesive formulation of claim 96 wherein solid drug comprises a drug selected from the group consisting of propranolol, ketorolac,

buprenorphine, scopolamine, terbutaline, clonidine, morphine, terazosin, prazosine, diliazem, verapamil, and ciproflaxocin.

98. (previously presented) The therapeutic adhesive formulation of claim 97 wherein said plasticizing solvent comprises a nonaqueous plasticizing solvent.

99. (previously presented) The therapeutic adhesive formulation of claim 96 wherein said C_4-C_{12} alkyl acrylate is selected from the group consisting of 2-ethylhexyl acrylate, butyl acrylate, n-decyl, n-nonyl, 2-ethyloctyl, isooctyl and dodecyl acrylate.

100. (previously presented) The therapeutic adhesive formulation of claim 96 wherein said C_4-C_{12} alkyl acrylate is provided in an amount of between bout 60% and about 80% by weight based on the weight of said adhesive.

101. (previously presented) The therapeutic adhesive formulation of claim 96 including a crosslinking agent.

102. (previously presented) The therapeutic adhesive formulation of claim 101 wherein said crosslinking agent is selected from the group consisting of butyl titinate, polybutyl titinate, aluminum isopropoxide, butyl titinate, aluminum zinc acetate, multivalent metals, methylol ureas and melamines.

103. (previously presented) A therapeutic adhesive formulation comprising an acrylic polymeric adhesive which includes between about 40% and about 90% of a C_4-C_{12} alkyl acrylate; between about 10% and about 40% by weight of a C_1-C_3 alkyl acrylate hardening monomer; between about 1% and about 15% by weight of a functionalizing monomer which facilitates crosslinking; and a therapeutically effective amount of a highly plasticizing drug component, wherein said blend is substantially anhydrous.

104. (previously presented) The therapeutic adhesive formulation of claim 101 comprising up to about 97% by weight of said acrylic polymeric adhesive.

105. (previously presented) The therapeutic adhesive formulation of claim 101 comprising greater than about 3% of said highly plasticizing drug component.

106. (previously presented) The therapeutic adhesive formulation of claim 101 wherein said highly plasticizing drug component comprises a liquid drug component.

107. (previously presented) The therapeutic adhesive formulation of claim 103 wherein said highly plasticizing drug component comprises a solid drug component dissolved in a plasticizing solvent.

108. (previously presented) The therapeutic adhesive formulation of claim 107 wherein said solid drug comprises a solid drug selection from the group consisting of propranolol, ketorolac, buprenorphine, scopolamine, terbutaline, clonidine, morphine, terazosin, prazosine, diliazem, verapamil, and ciproflaxocin.

109. (previously presented) The therapeutic adhesive formulation of claim 108 wherein said plasticizing solvent comprises a nonaqueous plasticizing solvent.

110. (previously presented) The therapeutic adhesive formulation of claim 105 wherein said C_4-C_{12} alkyl acrylate is selected from the group consisting of 2-ethylhexyl acrylate, butyl acrylate, n-decyl, n-nonyl, 2 ethyoctyl, isooctyl and dodecyl-acrylate.

111. (previously presented) The therapeutic adhesive formulation of claim 105 wherein said C_4-C_{12} alkyl acrylate is provided in an amount of between about 60% and about 80% by weight based on the weight of the adhesive.

112. (cancelled).

113. (previously presented) The therapeutic adhesive formulation of claim 105 wherein said crosslinking agent is selected from the group consisting of butyl titinate, polybutyl

titinate, aluminum isopropoxide, butyl titinate, aluminum zinc acetate, multivalent metals, methylol ureas and melamines.

114. (previously presented) A therapeutic adhesive formulation comprising between about 65% and about 97% by weight of an acrylic polymeric adhesive which includes a C_4-C_{12} alkyl acrylate and a C_1-C_3 alkyl acrylate hardening monomer, and between about 3% and about 35% by weight based on the weight of said mixture of a highly plasticizing drug.

115. (previously presented) The therapeutic adhesive formulation of claim 110 wherein said highly plasticizing drug component comprises a liquid drug component.

116. (previously presented) The therapeutic adhesive formulation of claim 110 wherein said highly plasticizing drug component comprises a solid drug component dissolved in a plasticizing solvent.

117. (previously presented) The therapeutic adhesive formulation of claim 116 wherein said solid drug comprises a solid drug selection from the group consisting of propranolol, ketorolac, buprenorphine, scopolamine, terbutaline, clonidine, morphine, terazosin, prazosine, diliazem, verapamil, and ciproflaxocin.

118. (previously presented) The therapeutic adhesive formulation of claim 117 wherein said plasticizing solvent comprises a nonaqueous plasticizing solvent.

119. (previously presented) The therapeutic adhesive formulation of claim 110 including between about 1% and about 15% by weight of a functionalizing monomer which facilitates crosslinking.

120. (cancelled).

121. (cancelled).